# Central Event Handler

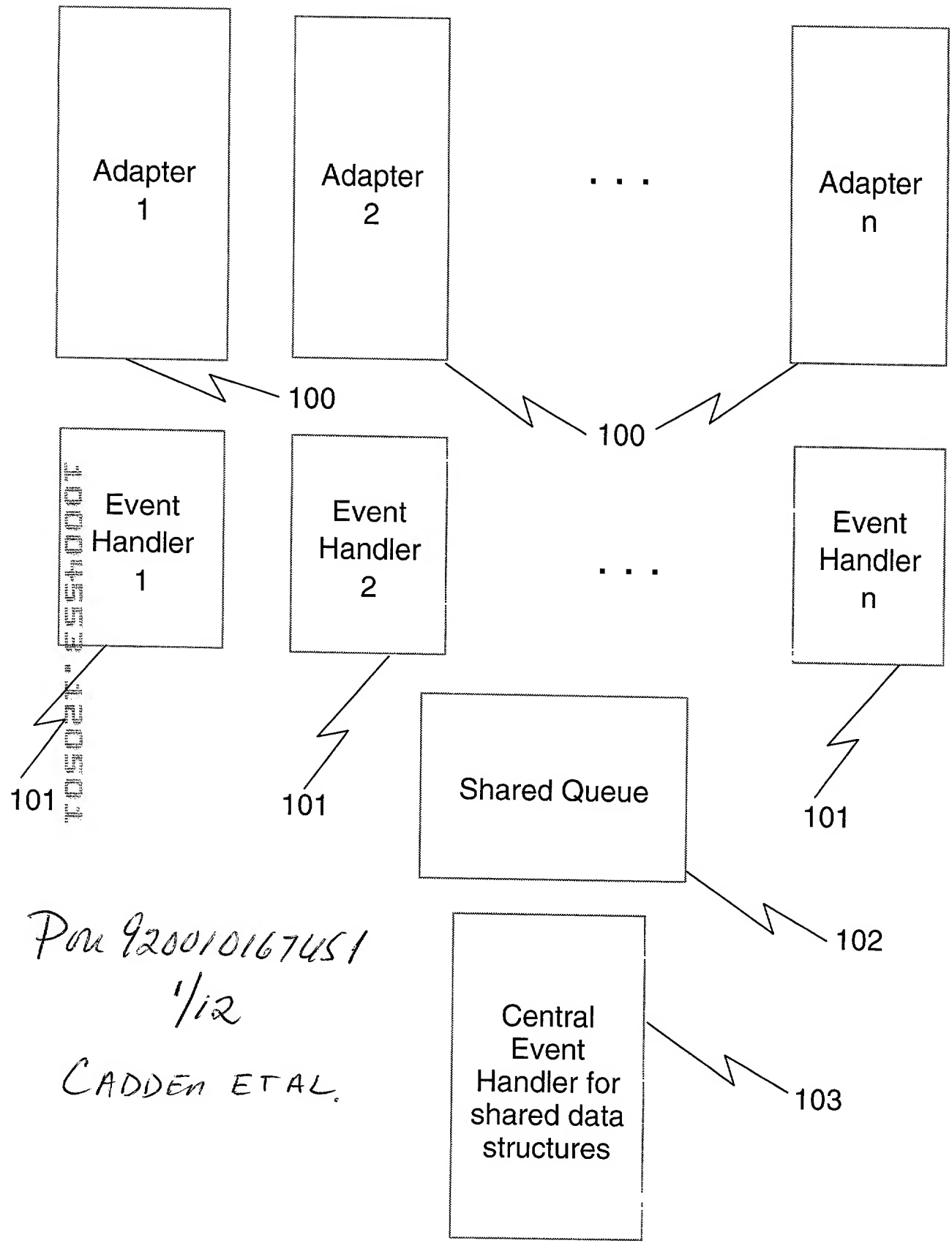


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Figure 1

# Shared Lock

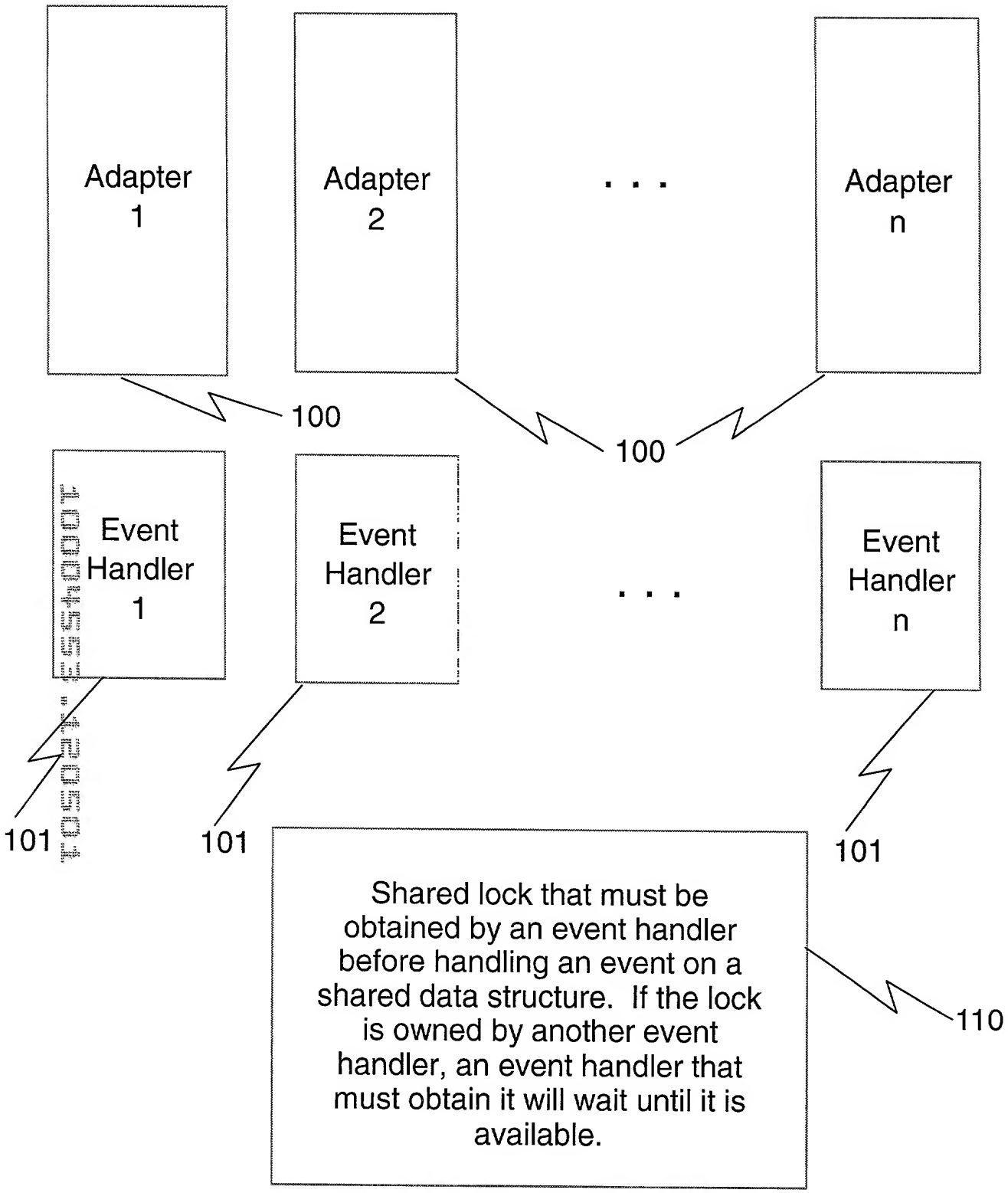


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Figure 2

# Task Structure

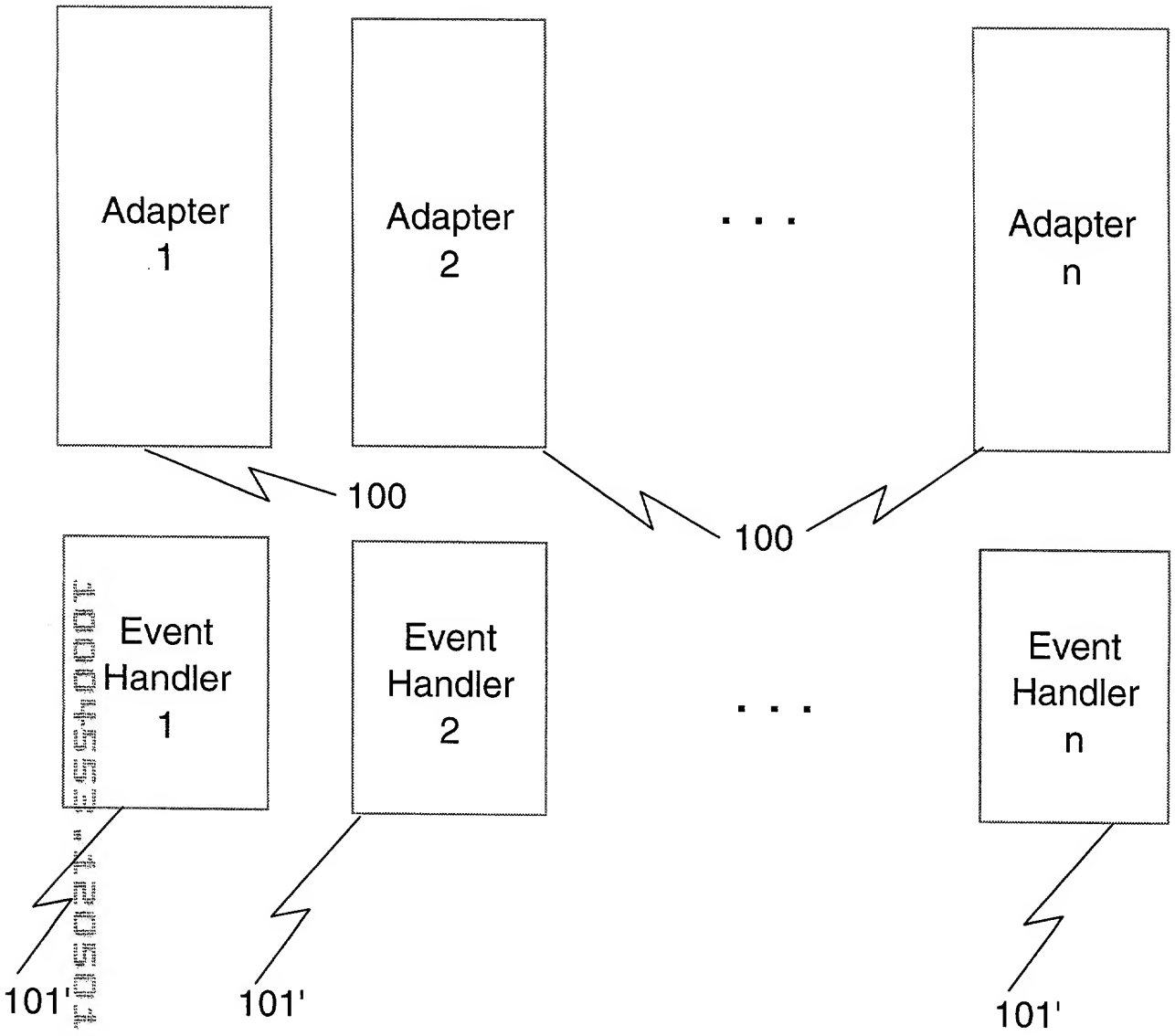


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Figure 3

# Method Employing Bit Arrays

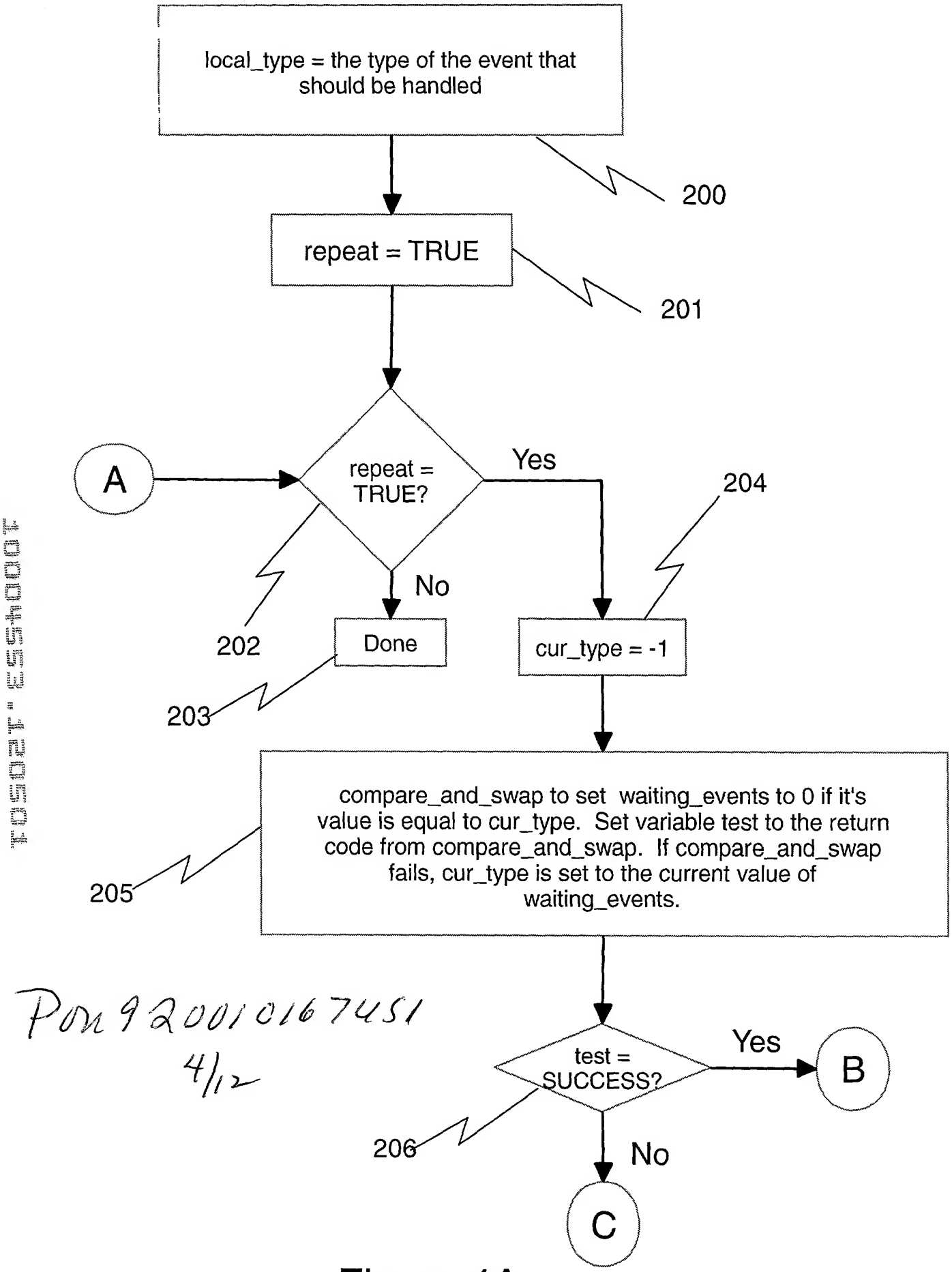


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Figure 4A

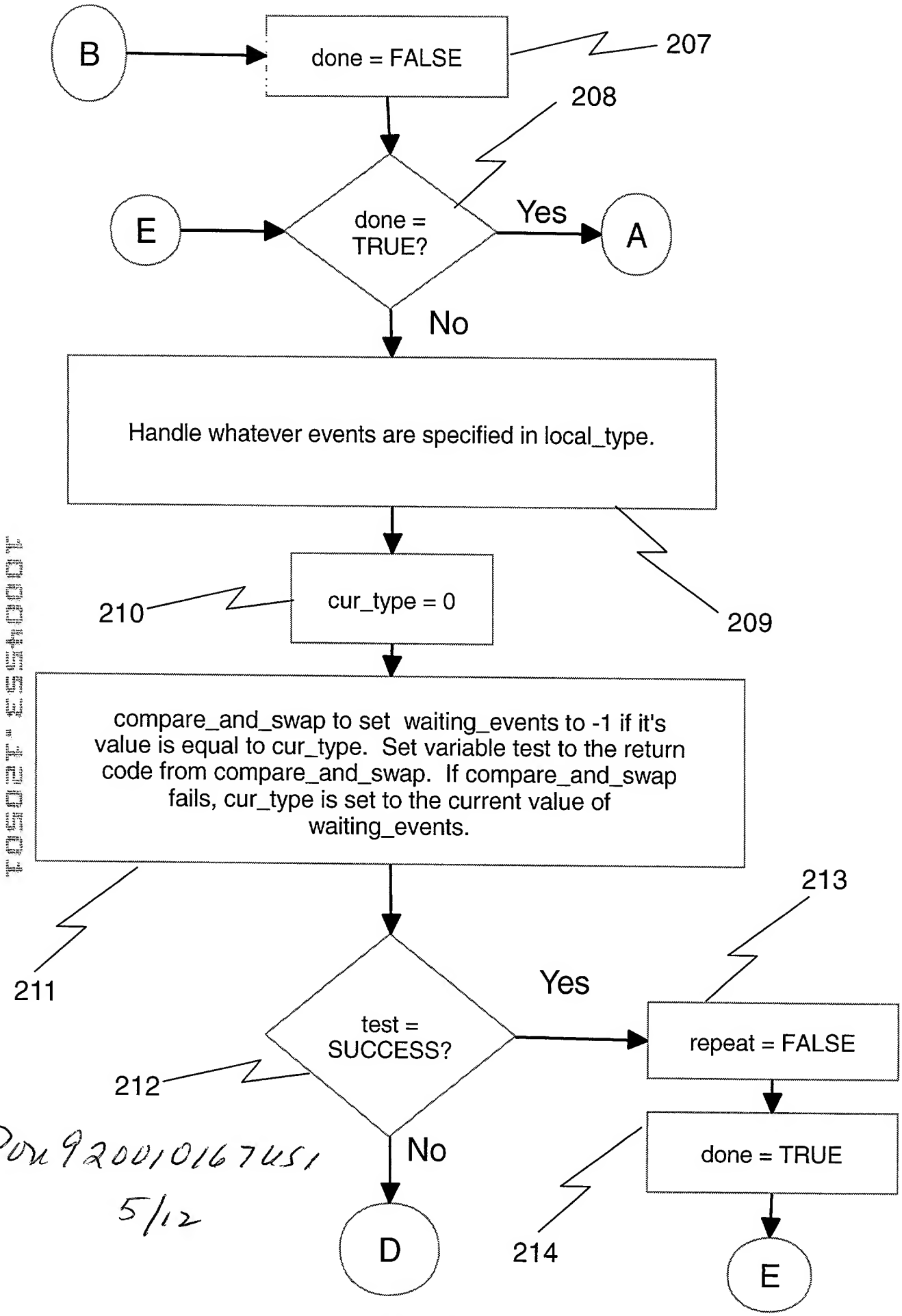
B
done = FALSE
207
208
E
done = TRUE?
Yes
A
No
Handle whatever events are specified in local_type.
209
210
cur_type = 0
compare_and_swap to set waiting_events to -1 if it's value is equal to cur_type. Set variable test to the return code from compare_and_swap. If compare_and_swap fails, cur_type is set to the current value of waiting_events.
211
213
Yes
test = SUCCESS?
repeat = FALSE
212
No
done = TRUE
D
214
E

Figure 4B

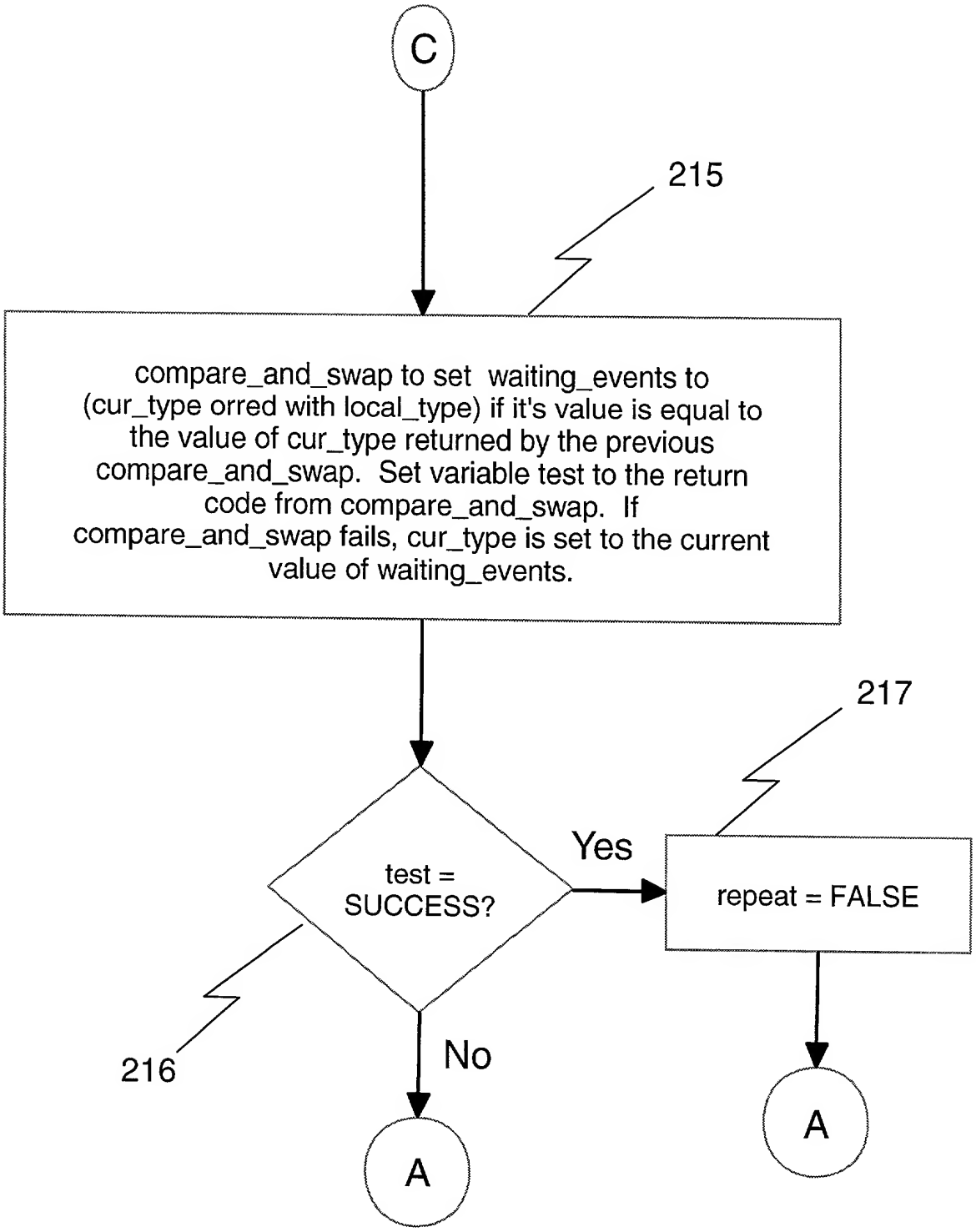


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Figure 4C

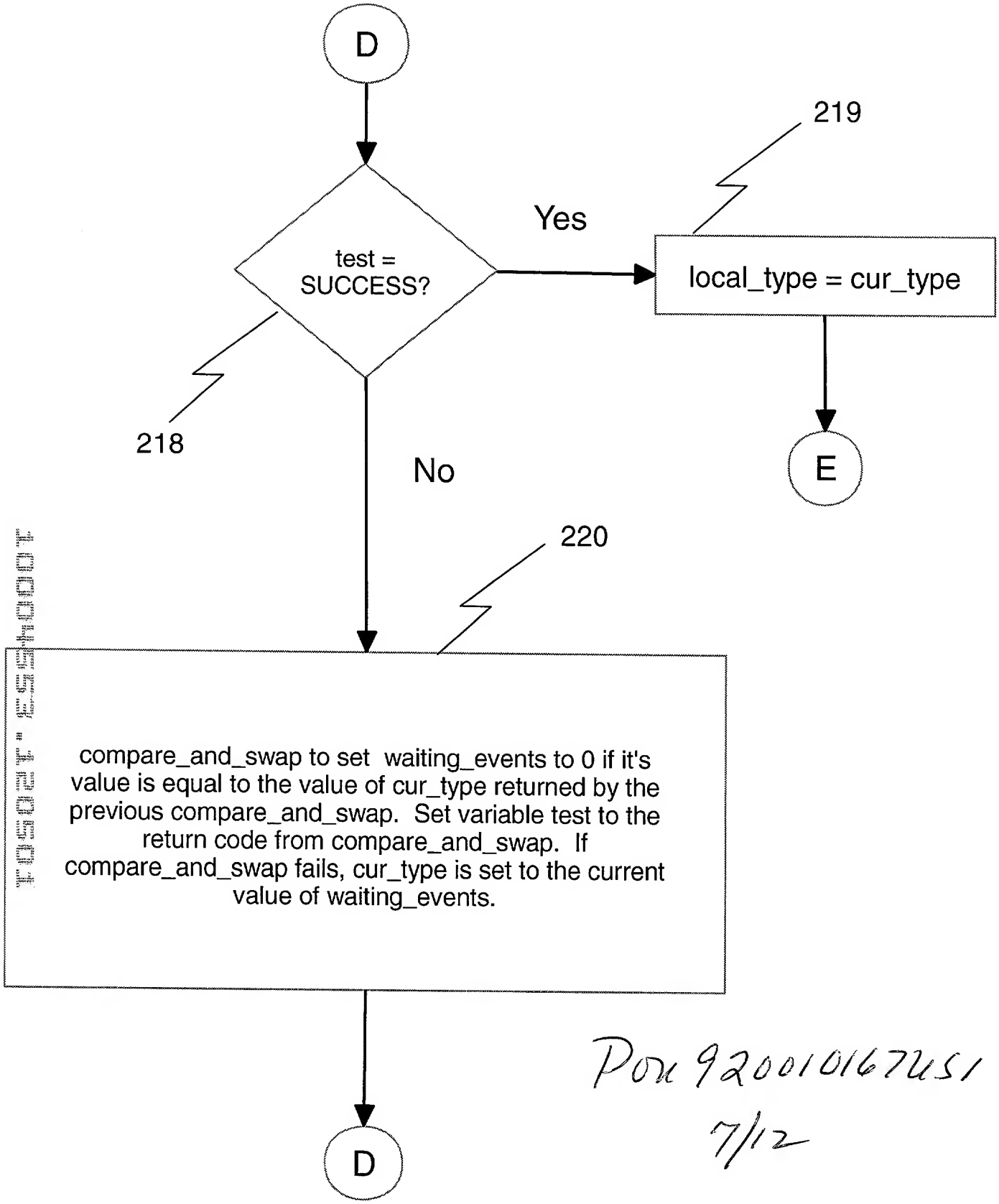


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Figure 4D

# Method Employing Linked Lists

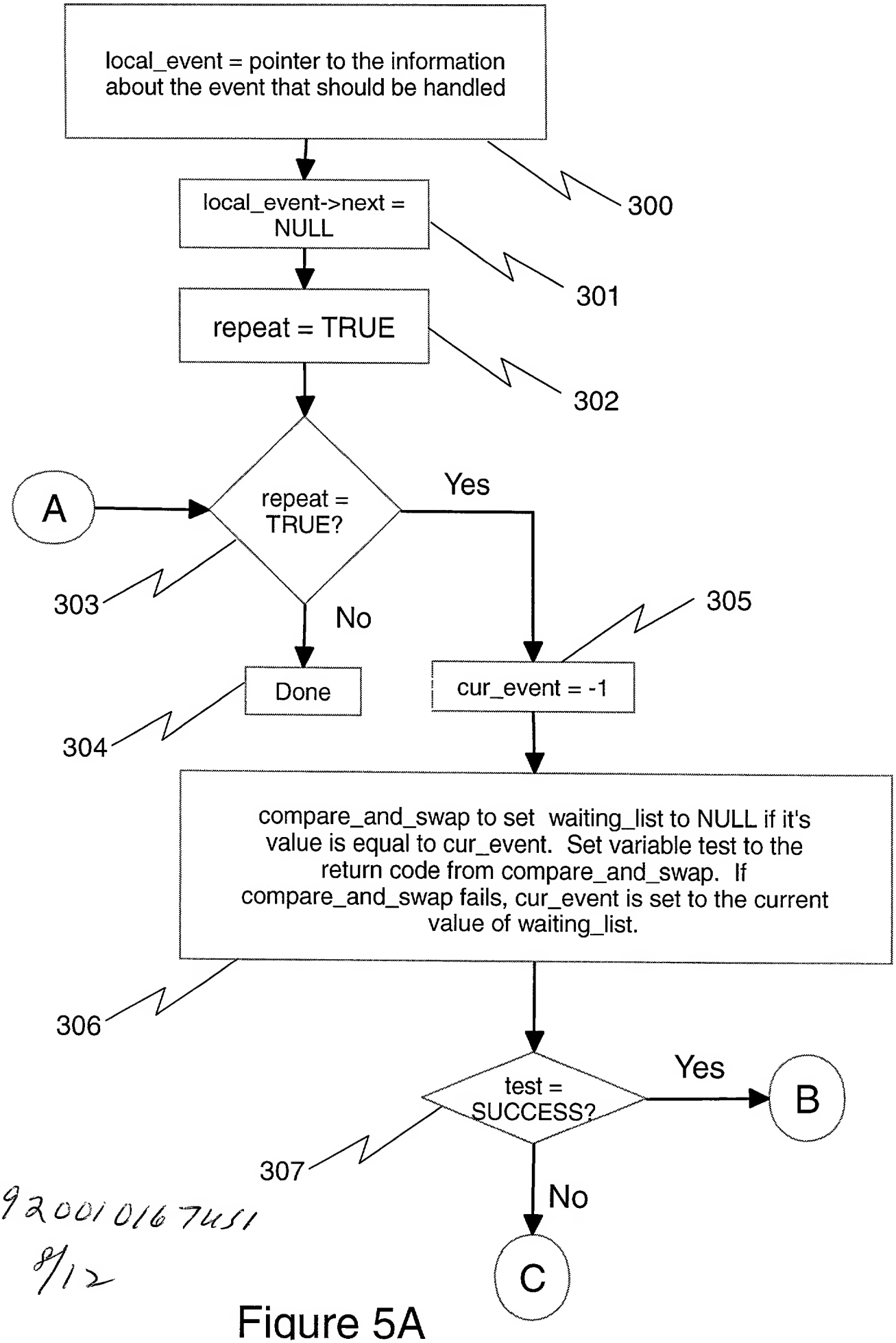


Figure 5A

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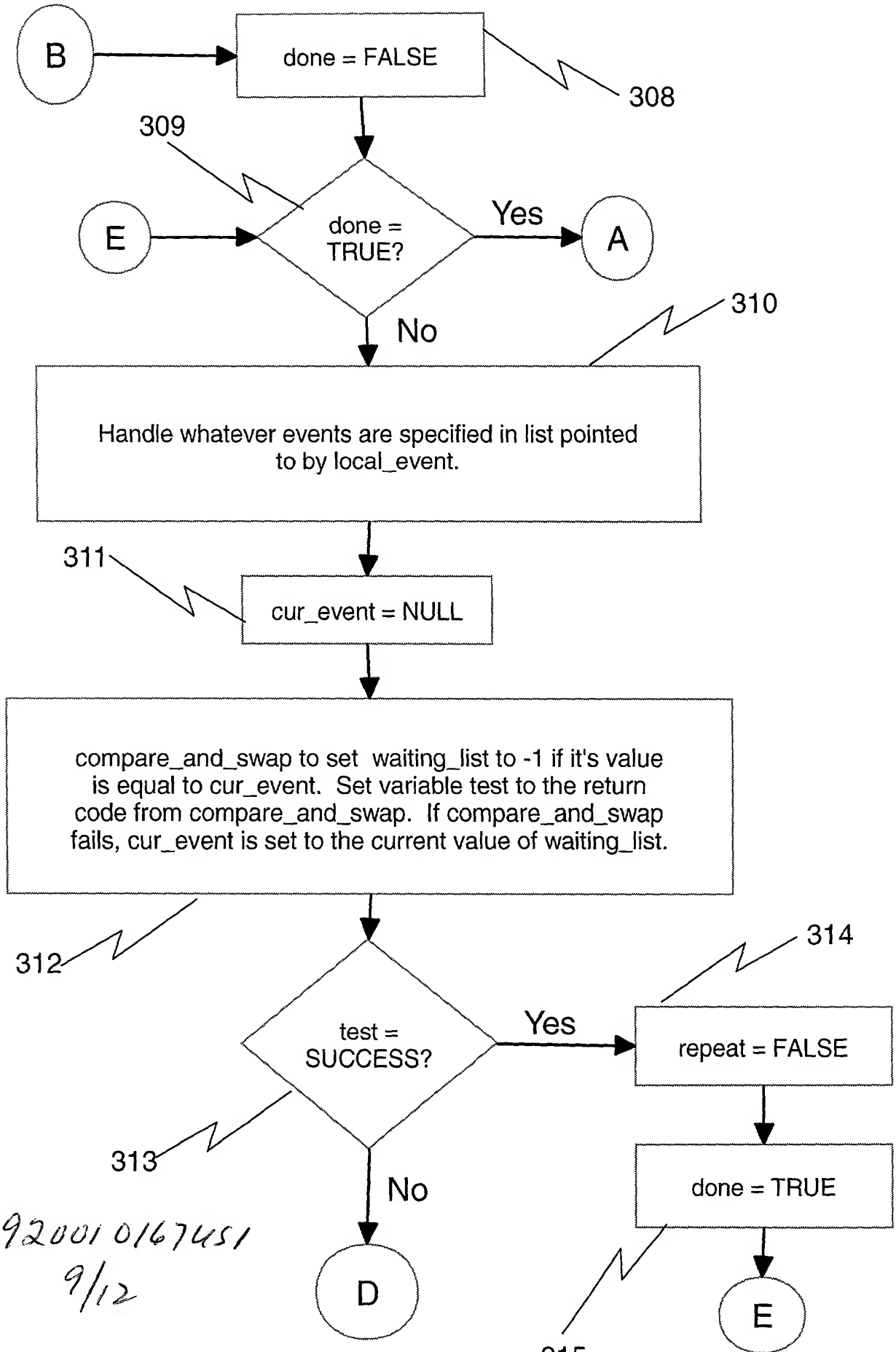


Figure 5B

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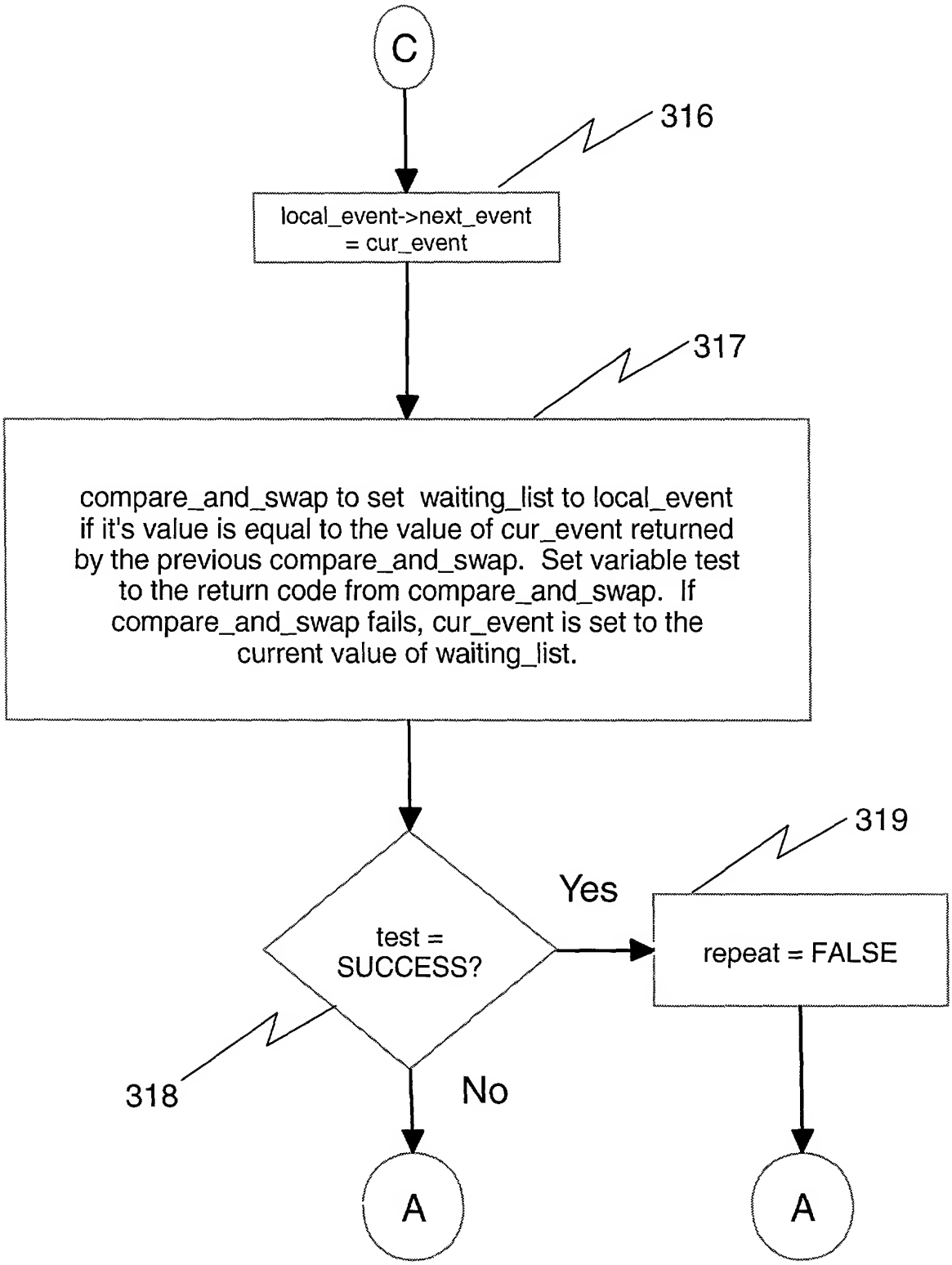


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Figure 5C

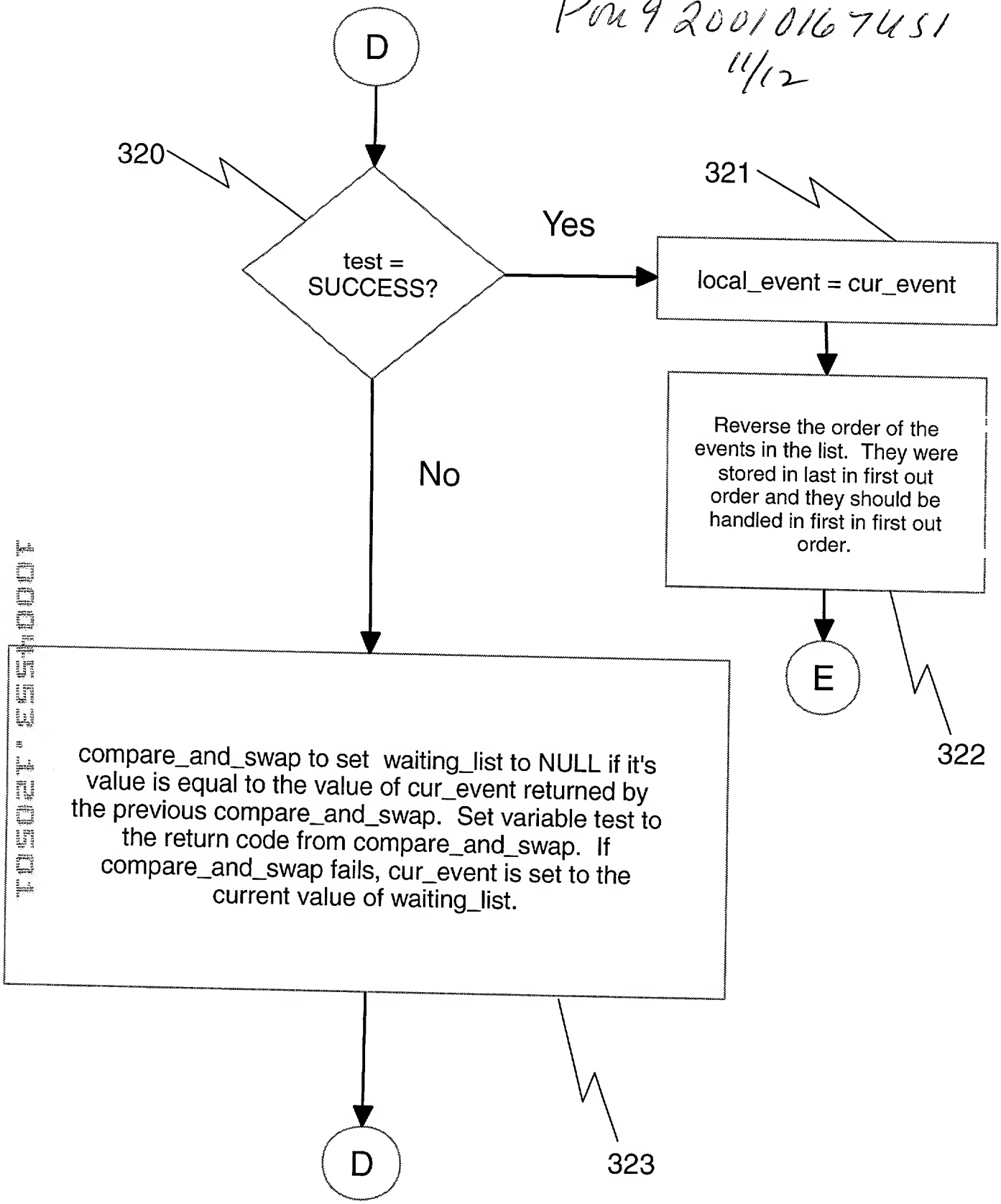
D
320
test = SUCCESS?
Yes
No
321
local_event = cur_event
Reverse the order of the events in the list. They were stored in last in first out order and they should be handled in first in first out order.
E
322
compare_and_swap to set waiting_list to NULL if it's value is equal to the value of cur_event returned by the previous compare_and_swap. Set variable test to the return code from compare_and_swap. If compare_and_swap fails, cur_event is set to the current value of waiting_list.
D
323

Figure 5D

# Compare and Swap Flow

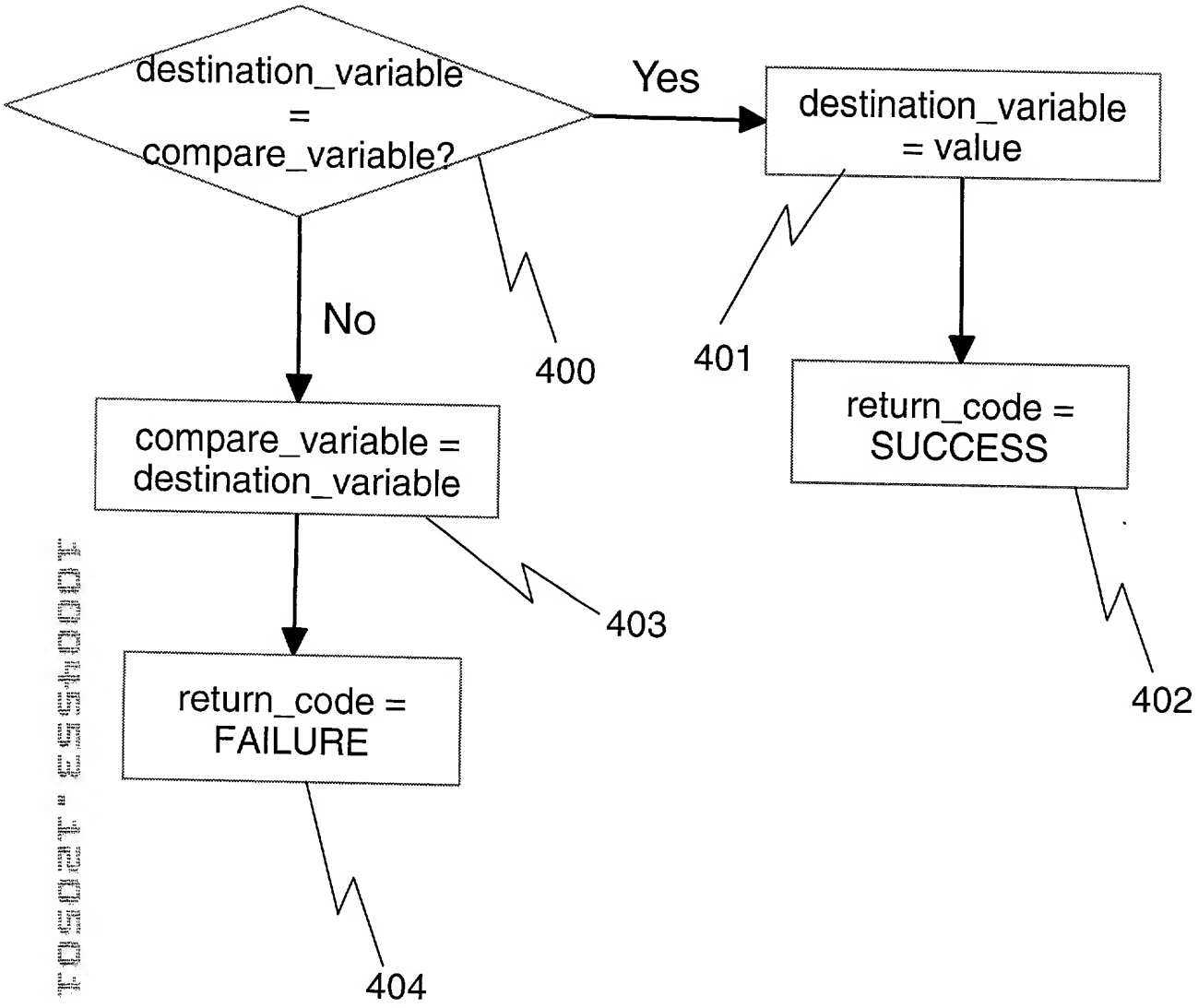


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Figure 6